

14. How would the number in front of mega- be different than pico- for the same object?
15. Which metric unit and prefix would be most convenient to measure each of the following?
1. The diameter of a giant sequoia tree
 2. The diameter of human hair
 3. Time necessary to blink your eye
 4. Mass of gasoline in a gallon
 5. Mass of a cold virus
 6. Amount of aspirin in a tablet
 7. Mass of concrete to pave a parking lot
16. What word prefixes are used in the metric system to indicate the following multiples?
1. 1×10^3
 2. 1×10^{-3}
 3. 0.01
 4. 1×10^{-6}
17. An antacid tablet contains 168 mg of the active ingredient ranitidine hydrochloride. How many grams of the compound are in the tablet?
18. A paper clip is 3.2 cm long. What is its length in millimeters?
19. State at least one advantage of the SI units over customary US units.

Challenge problems

20. The average person in the United States uses 340 L of water daily. Convert this to milliliters.
21. A quart is approximately equal to 926 mL. How many liters are in one quart?
22. One hundred fifty milliliters of rubbing alcohol has a mass of 120 g. What is the density of rubbing alcohol?
23. A ruby has a mass of 7.5 g and a volume of 1.9 cm^3 . What is the density of this ruby?